

Am



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/976,534	10/11/2001	Corey J. Norris	10011774-1	1509

7590 07/12/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

BRANT, DMITRY

ART UNIT	PAPER NUMBER
----------	--------------

2655

DATE MAILED: 07/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/976,534

Applicant(s)

NORRIS ET AL.

Examiner

Dmitry Brant

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warren (6,332,120) in view of Eghtesadi et al. (6,243,682)

As per claims 1, 10, 14, Warren discloses:

- (a) capturing audio data (storing audio stream - Col. 3, lines 50-52)
- (b) filtering the captured audio data to extract text data and keywords (Col. 3, lines 57-61 and Col. 4, lines 59-62)
- (c) converting the text data to electronic text (Col. 4, lines 59-62)
- (d) accumulating the electronic text in a text buffer (necessarily required for this embodiment - since audio embodiment uses memory to store audio samples (Col. 3, lines 50-52), the pure text-processing embodiment (Col. 4, lines 59-62) will also require memory for all processing of all text samples)
- (e) repeating steps (a) through (d) until a print command is extracted from the audio data (system continuously monitors for keywords - Col. 3, lines 57-60)
- (f) translating the electronic text accumulated in the text buffer into a rendered document (once keyword is detected, text is translated to a document - Col. 4, lines 39-46)
- (g) printing the rendered document (Col. 4, lines 45-47)

Warren does not disclose extracting print commands out of the audio data.

Eghtesadi et al. teaches extracting specific "print now" commands out of audio input by the user in order to control a photocopier through voice commands (Col. 2, lines 57-64)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Warren as taught by Eghtesadi et al. to use user-defined "print now" as a standard command for printing the data (Warren's system allows for such modification (Col. 4, lines 27-33)) in order to allow printing of the audio data through the use of voice commands. While Warren's system is originally targeted to processing of broadcast speech, it would have been obvious that his system would not require any modification to process live speech (from a person) as well as broadcasts. As a result, user-defined keyword (such as "print now") would cause system to print the stored contents of the buffer (since the context is also user-adjustable, one can adjust context to be sufficiently large to cover the whole buffer - Col. 5, lines 22-25)

As per claims 2, 11, 15, Warren discloses sensing audio data (detecting broadcast source - elem. 10, FIG. 1, Col. 3, lines 45-47)

Warren does not disclose generating an analog audio data signal in response to the sensed data and digitizing the analog audio data signal into captured audio data.

However, Warren discloses using Speech Recognition (SR) for processing of input audio (FIG. 1). The examiner takes the official notice that it is extremely well-known in the art of speech recognition that SR systems necessarily detect and capture audio data by use of microphones (or radio receivers, etc.), and eventually convert it

Art Unit: 2655

from analog to digital format (A/D conversion), since all of the standard speech processing operations are performed on the digitized data. (See Rabiner, Juang, Fundamentals of Speech Recognition, Chapter 3)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Warren to convert analog audio data (generated by the broadcast receiver, microphone, etc.) into digital signal (A/D conversion) in order to process the incoming signals in digital domain, since this is the domain where all of the standard speech recognition operations are performed by Speech Recognizer (FIG. 1)

As per claims 3 and 12,16, Warren discloses:

(a) comparing the captured audio data with text data selection criteria and print command selection criteria (keyword/context detection - Col. 3, lines 62-66)

(b) extracting, as keywords, the captured audio data meeting the keyword selection criteria (Col. 3, lines 42-45)

(c) extracting, as text data, the captured audio data meeting the text data selection criteria (Col. 3, lines 56-62)

Warren does not disclose extracting data as "print command."

Eghtesadi et al. teaches extracting specific "print now" commands out of audio input by the user in order to control a photocopier through voice commands (Col. 2, lines 57-64)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Warren as taught by Eghtesadi et al. to use user-defined "print now" as a standard command for printing the data (Warren's system

allows for such modification (Col. 4, lines 27-33)) in order to allow printing of the audio data through the use of voice commands. While Warren's system is originally targeted to processing of broadcast speech, it would have been obvious that his system would not require any modification to process live speech (from a person) as well as broadcasts. As a result, user-defined keyword (such as "print now") would cause system to print the stored contents of the buffer (since the context is also user-adjustable, one can adjust context to be sufficiently large to cover the whole buffer - Col. 5, lines 22-25)

As per claim 4, 17, Warren discloses converting voice stream (text data) to text (electronic text) using speech recognition (Col. 4, lines 59-62 and 12, FIG. 2).

As per claim 5, Warren does not disclose "appending the electronic text to contents of the text buffer."

However, Warren discloses converting audio to text and storing the processed text in memory (Col. 4, lines 59-62 and 20, FIG. 2). The examiner takes the official notice that it is well-known in the art to store processed text (already in electronic form) in computer memory (such as RAM) using standard memory allocation techniques, which involve allocating appropriate space within the memory (buffer) and appending information to the buffer on sequential basis. Such techniques are described in standard C/C++ or lower language programming books. In addition, such operations are also often performed in hardware - most MP3 players comprise buffers that sequentially store temporary data until it is retrieved by the controlling device (CPU) for playback.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Warren's process of storing text in memory by appending text to the memory buffer because this technique is extremely well-known in the art and would ensure that sequential additions to the buffer would not overwrite previous additions (thus making the invention unusable).

As per claim 6, 18, Warren discloses formatting the context (electronic text) stored in memory (necessarily involves using some form template for formatting and translation) (Col. 4, lines 47-52)

As per claims 7-8, 19, Warren discloses sending of text to a reporting function (elem. 14, FIG. 2), which necessarily translates electronic text in the form ready for printing and prints it as a written report (reproducing rendered document into print media) (Col. 4, lines 43-46)

As per claims 9, 13, 20, Warren does not disclose purging the text buffer.

However, Warren discloses that contexts are only stored for some limited duration (Col. 5, lines 21-25), or, in other words, are at least partially limited by the size of the storage memory or performance reasons. The examiner takes the official notice that one of ordinary skill in the art would understand that Warren's system must occasionally purge the memory (20, FIG. 2) during its operation, because his system's storage capacity is naturally limited by the physical capacity of the installed memory

(RAM or disk) and thus the system would have to remove the processed text data in order to avoid crashing due to insufficient memory. For example, Windows often prompts users to close down some of the active applications (which take up memory) when it detects that the computer does not have sufficient free memory for normal operation. In such cases, freed memory is purged or, at least freed up for the use by other programs.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Warren to purge the buffer in order avoid running out of memory on the computer system.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goldhor et al. (5,231,670) teach voice controlled dictation system, which under 35 USC 103 would read onto the claims of this application. While Goldhor et al. do not teach specific "printing" commands, they do teach a dictation system that is capable of understanding other standard commands.

Kaufman et al. (5,168,548) teach voice controlled, report generating system.

Yaker (5,950,167) teaches voice-controlled computer program capable of printing.

Bergeron et al. (5,051,924) teach voice-controlled generation of reports.


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Brant whose telephone number is (703) 305-8954. The examiner can normally be reached on Mon. - Fri. (8:30am - 5pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Talivaldis Ivars Smits can be reached on (703) 306-3011. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Tech Center 2600 receptionist whose telephone number is (703) 305- 4700.

DB

6/24/04


6-28-2004

NGUYEN T. VO
PRIMARY EXAMINER